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SYDNEY: SATURDAY, JANUARY 8, 1921.

No. 2.

OBSERVATIONS ON SOME CASES OF ACUTE RUPTURED ULCERS OF THE STOMACH AND DUODENUM.¹

By Howard Bullock, M.B., Ch.M. (Sydney.), F.R.C.S. (Eng.), B.Sc. (Oxon.).

Honorary Assistant Surgeon, St. Vincent's Hospital Sydney;
Honorary Assistant Surgeon, Sydney Hospital;
Senior Surgeon, Renwick Hospital for Infants, Sydney.

When discussing ulcers of the stomach and duodenum, it is impossible to pass by without expressing admiration for the wonderful work in this field of Moynihan and the Mayo brothers.

Since the report of Dean's (1) case of perforated duodenal ulcer in 1894 as a definite clinical entity, the first of its kind that appears in English literature, much progress has been made and in the short paper I have the honour of reading this evening I fear nothing original can be claimed. I have set out to put before you some simple and direct observations and, I trust, some convincing facts in connexion with this particular class of case. It has fallen to my lot to operate in thirty-two of these cases during the past seven years, thirty at the Sydney and St. Vincent's hospitals, with the help of the house surgeons there, and two in private. These observations show that the condition, if properly handled, is not so fatal as it appears.

While speaking on this subject, it is interesting to quote an epitome of Soresi's experiments on dogs, (2) in which he proved:

- (1) That wounds of the stomach may recover spontaneously.
- (2) That perforations of the duodenum are always fatal, if not operated upon.
- (3) That all wounds of the stomach and duodenum may be cured, if operated upon within three hours after injury.
- (4) That the mortality rises in all such cases as the time between the injury and intervention increases.

Though statistics are inconclusive and very misleading, yet to some extent they give one a criterion as to the seriousness of a disease, if carefully and truthfully compiled.

It is of interest to note the comparative rarity of gastric ulcer: it is a fraction of 1% at general necropsies, according to Mayo. (3) He also points out the greater frequency of its occurrence in males, being in the ratio of three males to one female; also that duodenal ulcer is four times more common than gastric, as occurring in their clinics between the years 1906 and 1920, when 1,191 gastric and 4,532 duodenal ulcers were operated upon, the former with 3.77% mortality, the latter with 1.76% mortality.

Statistics.

My observations embrace thirty-two cases of acute ulcers perforating into the peritoneal cavity, thirty of which occurred in males and two in females.

In only two cases, one of which was in a woman, were definite gastric ulcers met, thus differing greatly from Kelly's series. (4) Both were on the posterior wall and had to be attacked and later drained through the gastro-colic omentum. The woman was but 23 and the man 61 years of age.

The other thirty cases were in males. The œdema and induration were so great, with complete obliteration of the vein coursing over the pyloric sphincter, that it was impossible definitely to discriminate as to the localization of the lesion, so they are described as "ulcers involving the gastro-duodenal area of the digestive tract in the region of the pylorus." In all these thirty cases the lesion was found on the anterior surface of the bowel and varied from an ulcer 1 cm. in diameter, with stomach contents, consisting of food in all stages of digestion, simply pouring out, to a hole the size of a crow quill, with a small escape of digestive juices.

There have been only two deaths, one in the woman with the gastric ulcer just referred to, with symptoms of perforation for about ten days before operation; the other in a young man of 40 years, whose temperature and pulse became normal and in whom 16 days after operation pneumonia supervened, then empyema developed and eventually pneumococcal pyæmia, necessitating drainage of the right knee joint.

Thus the mortality has been two in thirty-two, or, approximately, 6%.

Symptoms.

As to the main symptoms, in every case, after very careful inquiry, some trace of digestive troubles was found. In some it was nothing more than a little discomfort after food and in others there was very definite chronic indigestion. In just over one-half of the patients symptoms of griping pain occurred from three to five days before the catastrophe. In all, the onset was ushered in with sudden acute abdominal pain, which rendered them completely *hors de combat*. There was vomiting in one-fourth of the cases only. In one-half of the cases there was great distress and collapse; in a policeman, with indigestion for 16 years, operated upon at Sydney Hospital, the shock was so great that he remembers nothing from the time of the onset till his recovery from the anæsthetic; he now enjoys perfect health. In several patients there was practically no shock, the pulse and temperature being normal, but intense pain was present, which passed off completely in a few. All had spasmodic breathing and groaning, with a feeling of great tightness in the upper abdomen, where the muscles were of board-like hardness. This hardness in some was diffuse, especially in those where the escape of stomach contents was extensive; but in the leaking type, where the fluids seemingly trickled down the right side of the abdomen, the muscles of that side mainly were affected, though those of the upper portion of the left side of the abdomen were also involved.

Diagnosis.

Except in two cases, in which a preliminary appen-

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 12, 1920.

dicectomy was done by mistake, the diagnosis was obviously an acute lesion in the upper segment of the abdomen.

The abdomen was retracted, except in the case of the young woman with symptoms of perforation for ten days and in a man with symptoms of perforation for seven days and a subphrenic abscess, when it was somewhat distended.

The abdominal muscles were tonically contracted into a state of boardy hardness, which persisted, even when the pain had ceased. This condition was very typical.

The pulse and temperature varied. In about half of the cases the temperature was subnormal and the pulse on the average 90. The further the distance from the onset of symptoms the higher the temperature and the more rapid the pulse. In only two of the successful cases was the pulse above 110. In one the temperature was 40° C. In the majority the temperature ranged from 35.6° to 37.3° C.

In all but a few intestinal stasis was absolute, not even flatus being passed.

The liver dullness was decreased and in none but the fatal case of the woman was it obliterated.

Leucocytosis was of no prognostic nor diagnostic value and varied from 9,000 to 19,000:

Differential Diagnosis.

In making the final diagnostic plunge before operating, the acutely perforated appendix was the most difficult to exclude, but the rigidity was not so pronounced, nor was the jerky breathing present—so typical of perforated ulcer. Pleurisy and pneumonia also presented themselves and even a ruptured gall bladder. In the latter, help was obtained from a careful history.

Operation.

Though whole-heartedly condemning operating by the clock, in these cases every endeavour was made to come to a quick decision and to complete the operation expeditiously and with as little trauma as possible.

Most of the operations were completed in fifteen minutes; none, even including those with the appendicectomy, took more than thirty minutes.

An incision was made in the right rectus to the inner side of the ninth right costal cartilage, the centre being about midway between the umbilicus and ensiform cartilage.

The ulcer in every case was closed by a single purse-string suture of No. 1 plain catgut, the free end of the suture being used to tuck over the ulcer some tag of fat from the gastro-hepatic or great omentum. Some of the ulcers were large and hard to close, but no thought was given to causing stenosis and the results have proved that the procedure was correct.

As a routine, a stab drain was inserted into the right kidney pouch, through the right loin, below the right costal margin. In those cases of ulcer of the posterior wall of the stomach, drainage of the lesser sac was done through the gastro-colic omentum.

When the rupture was large and the peritoneal cavity badly soiled by escaped gastric contents, a drain was inserted into the pelvic pouch through the *linea alba*. No swabbing was done, but as far as possible all articles of food were removed.

The wound was always sewn in two layers with chromic gut.

After-Treatment.

The after-treatment consisted in keeping the patient on sips of water by the mouth for four or five days and rectal feeding and removing the tubes when expedient, in most at the end of 24 hours, in some not for 72 hours. The patients in the majority of instances were on a liberal diet by three weeks and anxiously awaiting their discharge from hospital.

Commentary.

In the series there has been one patient under 20 years, five between the ages of 21 and 30 years, 14 between 31 years and 40 years, five between 41 years and 50 years, two between 51 and 60 years, and five between 61 and 68 years. Thus, nearly 50% of the cases have occurred in patients between the ages of 31 and 40 years.

Excluding a man 48 years of age, with symptoms of perforation for seven days and a large subphrenic abscess, and another of 61 years, with symptoms of perforation for 18 hours, the average time between perforation and operation was seven hours in the cases which ended in recovery.

The average stay in hospital for these cases was three and a half weeks.

Of the 30 patients I have been able to trace 21. Three have been operated upon further, a posterior gastro-enterostomy being performed. In two the operation was done four and six months respectively after the first operation, in spite of the absence of symptoms, as it was thought at the time, over five years ago, that this was the correct procedure; at operation no sign of disease could be found.

In the third case a definite indurated ulcer was present at the site of the old perforation. This was done on July 1, 1920, two and a half years after the perforation, two months after which symptoms of indigestion returned.

In two other patients symptoms still persist in a slight form, though X-ray examination with an opaque meal reveals no definite signs of lesion.

Thus, taking into consideration the patient operated upon on July 1, 1920, for definite symptoms, three patients certainly have had definite digestive symptoms since the perforation. Eighteen are apparently quite free, one of them, a well-known herbalist, operated upon at St. Vincent's Hospital five years ago for a huge ulcer; he is now 73 years of age. This points to the apparent curative effect of perforation, which Mayo (3) points out is analogous to cauterization. It also indicates that closure by a purse-string suture (catgut) is an effective and simple method of treating these cases and apparently leaves no stenosing after-effects.

Seven of these patients have been given a bismuth meal and have had an X-ray photograph taken, but the previous operation had, to a great extent, spoilt the picture and thus I have discarded this measure and relied on their signs and symptoms to judge of their present condition.

When one thinks of Richardson's (5) and Warren's (6) observations and Moynihan's (7) early list of cases, with mortality rates of 44.2%, 35%, 75%

respectively, one is forced to pause and think. On the other hand, Kelly (4) reported ten cases without a death.

Is it that the class of patient that is affected in Australia, is better fed and leads a healthier life and thus has greater resisting powers? Or is it that the general practitioner who has sent in most of these patients, some even a hundred miles from the metropolis, is a better man at his work and recognizes the seriousness of the condition and the urgent demand for surgical interference?

In conclusion, I am forced to come to this decision:

(1) That a precise diagnosis and an immediate operation, expeditiously performed, with as little trauma as possible, in which a purse-string suture of easily absorbable material, such as plain catgut, is used to stitch a tag of fat from the gastro-hepatic or great omentum over the site of perforation, is the ideal method of dealing with these cases.

(2) That the perforation alone causes so much shock to the patient that it demands the use of the simplest and most expeditious, yet effective, methods for relief.

(3) That in the vast majority of cases the mere fact of perforation will in itself effect a cure.

(4) That gastro-enterostomy theoretically may be ideal, but can be delayed till some future date and will in the great majority of cases never be needed.

References.

- (1) Dean: *British Medical Journal*, 1894, I., 1191.
- (2) Soresi: *Gior. d. R. Accad. di Med. di Torino*, 1915.
- (3) Mayo: *British Medical Journal*, July 24, 1920, 192, p. 103.
- (4) Kelly: *The Medical Journal of Australia*, 1917, II., 163.
- (5) Richardson: *Boston Medical and Surgical Journal*, 1917, CLXXVI., 158.
- (6) Warren: *Lancet*, Lond., 1915, CLXXIX., 1239.
- (7) Moynihan: *Lancet*, 1901, II., p. 1656.

Name.	Age.	Date of Operation.	Time Between Perforation and Operation.	Immediate Result.	Present State.	Remarks.
C.M.	33 years	July 7, 1914	11 hours	Cure	Unknown	Posterior gastro - enteros - tomy done. November 4, 1914
L.P.	31 years	December 9, 1914	5 hours	Cure	Unknown	Posterior gastro - enteros - tomy done, June 19, 1915
J.F.	66 years	October 12, 1915	3 hours	Cure	Unknown	_____
J.H.	67 years	December 18, 1915	5 hours	Cure	Well	_____
R.S.D.	39 years	March 4, 1916	15 hours	Cure	Unknown	_____
J.R.	34 years	May 5, 1916	3 hours	Cure	Unknown	_____
L.S.	41 years	June 16, 1916	8 hours	Cure	Well	_____
J.R.P.	57 years	August 18, 1916	11 hours	Cure	Unknown	_____
D.B.B.	31 years	December 29, 1916	3 hours	Cure	Well	_____
M.McG.	60 years	May 3, 1917	7 hours	Cure	Well	_____
K.P.	67 years	October 24, 1917	8 hours	Cure	Well	_____
E.P.	31 years	October 31, 1917	7 hours	Cure	Well	_____
L.R.	23 years	November 2, 1917	10 days	Died in 24 hours	_____	Gastric ulcer
W.J.	32 years	November 23, 1917	7 hours	Cure	Unknown	Posterior gastro - enteros - tomy, July 1, 1920
E.A.	21 years	January 2, 1918	5 hours	Cure	Well	_____
A.McA.	67 years	January 8, 1918	7 hours	Cure	Unknown	_____
D.McL.	40 years	May 9, 1918	10 hours	Died six weeks after operation	_____	Empyema and knee joint opened
T.C.	61 years	September 4, 1918	18 hours	Cure	Unknown	Gastric ulcer
A.P.	19 years	October 2, 1918	5 hours	Cure	Well	_____
R.H.	31 years	November 12, 1918	11 hours	Cure	Well	_____
J.K.M.	40 years	December 2, 1918	6 hours	Cure	Unknown	_____
H.O.	26 years	January 13, 1919	5 hours	Cure	Well	_____
L.A.	50 years	February 6, 1919	9 hours	Cure	Symptoms of indigestion	_____
A.C.	30 years	February 6, 1919	3 hours	Cure	Well	_____
E.M.	38 years	February 8, 1919	5 hours	Cure	Well	_____
E.B.	26 years	April 11, 1919	7 hours	Cure	Well	_____
B.S.	41 years	May 11, 1919	9 hours	Cure	Well	_____
W.D.	44 years	May 21, 1919	8 hours	Cure	Well	_____
F.B.	40 years	June 6, 1919	5 hours	Cure	Symptoms of indigestion	_____
C.M.	39 years	June 11, 1919	9 hours	Cure	Well	_____
P.B.	48 years	December 18, 1919	7 days	Cure	Well	_____
A.L.	28 years	May 14, 1920	9 hours	Cure	Well	Subphrenic abscess; developed empyema; three months in hospital

HÆMORRHAGIC CONDITIONS IN THE NEW-BORN.¹

By the Late Ivan E. Ashby, M.D., B.S. (Adel.).

It is always permissible to discuss the principles underlying the treatment of any particular disease. Discussion makes for a more efficient rationalism and diminishes the tendency to empiricism, with its re-

¹ This article was written by the late Dr. Ashby shortly before his death. The form of presentation has been slightly modified.

sultant stagnation. Those of us who are debarred from taking an active part in the campaign against disease, but who yet have ample time for reading and thought, may be able in this way to assist those who have more to do and less time in which to do it.

My own experience in the treatment of hæmorrhagic affections in the new-born is limited to a few cases only and dates back nearly three years. But as reports of cases treated by subcutaneous or intra-

venous injections of "whole blood" are frequently published, ample opportunity arises to maintain interest in the subject.

The aspect of the question with which I wish to deal, is the use of whole blood in the actual arrest of dangerous hæmorrhage. The treatment of the results of hæmorrhage and the so-called "replacing of lost blood" do not concern us.

I have often thought that the average practitioner may be deterred from attempting a form of treatment which, in the reports of cases, is constantly associated with such subjects as "compatibility of donors," "tests for groups," "use of citrates and other anticoagulants," and with descriptions of complicated apparatus; whereas, did he but realize it, successful treatment does not necessarily involve familiarity with any of these details, though, of course, each has its own particular importance. While all precautions should be taken in the treatment of hæmorrhage in new-born infants, the absence of special apparatus and other facilities is no contraindication to the treatment of these cases with whole blood.

I am discussing only those conditions of hæmorrhage which are apparently due to a deficiency in clotting, not those due to trauma or to changes in the vessel walls or where the bleeding is merely an incident in an otherwise fatal disease.

The Physiology of Clotting.

In the first place, I propose to discuss the physiology of clotting. There are two theories:

Theory No. 1.—According to this theory, there are two stages, viz.:

(1) Thrombokinase (thromboplastin) acts on thrombogen (prothrombin) in the presence of soluble calcium to produce thrombin.

(2) Thrombin acts on fibrinogen to produce fibrin, i.e., the clot.

Thrombokinase is formed from (a) blood cells, chiefly platelets and leucocytes, (b) injured tissues.

Thrombogen is normally present in blood and is probably derived from the blood platelets.

Calcium salts are necessary for the production of thrombin. They are not essential for the second stage, but hasten its occurrence. Excess of calcium and deficiency of calcium act in a similar fashion, by inhibiting clotting.

Thrombin has a ferment action, which, according to some authorities, is not quantitative. Others state, however, that it acts in the ratio of about 1 to 215.

Fibrinogen is normally present in the blood and is probably formed in the liver.

Anti-thrombin is also probably formed in the liver and is normally present in the blood. It inhibits clotting and acts possibly by neutralizing the thrombin or by neutralizing thrombogen and thus preventing thrombin formation.

Theory No. 2.—The second theory assumes that the thrombogen is linked up in combination with anti-thrombin. (1) In the first stage some injury causes the formation of thrombokinase, which neutralizes the anti-thrombin and thus liberates the thrombogen. The thrombogen, then, with the assistance of calcium, forms thrombin. (2) The second stage is similar to that of the first theory. The thrombin acts in turn on fibrinogen to produce fibrin.

Pathology in Relation to Treatment.

I will now consider the pathology of clotting as it affects the infant and see how the treatment for the production of hæmostasis should vary according to the stage at which the clotting mechanism fails.

If the breakdown in the mechanism is prior to the formation of thrombin, all that is necessary is to supply thrombin and as its action is probably not quantitative, only a small amount of blood is required—a few cubic centimetres of non-citrated blood given subcutaneously.

If the breakdown is in the second stage, i.e., if the thrombin is neutralized by excess of anti-thrombin or if there is deficiency of fibrinogen, then the indication would be twofold, viz.: (i.) to supply a large amount of blood and (ii.) to supply the blood locally at the bleeding point and keep it there sufficiently long, that it may clot and plug the oozing tissues before the anti-thrombin has time to exert its neutralizing action. Obviously this second procedure is only possible when there is an accessible bleeding point or area, e.g., the umbilicus or the gums.

The following points in the pathology of the subject have been noticed:

(1) In jaundice there is a deficiency of calcium.
(2) In hæmophilia there is a deficiency of thrombogen and perhaps also of thrombokinase.

(3) The blood platelets are deficient in the so-called primary or essential purpuras and, as the platelets are a source of supply of thrombokinase, it is suggested that in these diseases there is a breakdown in the formation of this essential element to the occurrence of clotting. A similar observation has been made in many cases of secondary purpura, e.g., in sepsis, syphilis, etc..

(4) In many morbid conditions the deficiency in the clotting mechanism would seem to be more or less in proportion to the involvement of the liver by disease. This pathological involvement of the liver may inhibit the process of clotting by causing one of three things: (a) an over-production of anti-thrombin, (b) an under-production of fibrinogen, (c) an adverse influence on the thrombogen.

(5) There is a deficiency of fibrinogen in chloroform poisoning and in the idiopathic *melæna neonatorum*.

(6) An excess of anti-thrombin has been proved to exist in many diseases in adults, e.g., leukæmias, anæmias. This has not, however, been demonstrated in the case of children.

In most of these cases the indications for treatment should be met by supplying a few cubic centimetres only of normal blood containing the formed or forming ferment, thrombin. Large quantities of blood are, as a rule, not essential, though they may be used, if available. On due consideration of the physiological factors of clotting, it will be seen that small amounts only are essential in the diseases mentioned under the majority of the above headings, viz., in jaundice (since deficiency in calcium means an insufficiency for the formation of thrombin), in hæmophilia, in the primary and some of the secondary purpuras, in those pathological conditions of the liver where the thrombogen is affected adversely. A larger amount of blood would be necessary in those diseases

involving the liver where there is under-production of fibrinogen and in chloroform poisoning and idiopathic *melena neonatorum*, since more considerable quantities of blood are necessary to supply the deficient fibrinogen. Those diseases involving the liver with over-production of anti-thrombin and the adult diseases characterized by an excess of anti-thrombin would be treated in either way, by small amounts or large quantities of blood, according to which theory of clotting is accepted.

Points in the Treatment.

In nearly every case of persistent bleeding in the new-born, if blood transfusion can afford any benefit, small doses only of blood are required. The reasons for this are:

(i.) The breakdown is in the production and not in the action of thrombin.

(ii.) The action of thrombin is qualitative or only slightly quantitative.

(iii.) A few cubic centimetres of normal blood contain enough thrombin (or enough of the missing precursors of thrombin) to enable the second stage of clotting to take place.

The use of large doses of blood is indicated (a) when the small subcutaneous dose does not succeed, (b) when there is deficiency of fibrinogen, (c) when there is excess of anti-thrombin which needs neutralizing, (d) when all facilities for giving large doses are available.

The majority of patients, however, who do not react to small doses, will not react to large, but will die in any event, *e.g.*, in certain cases of Bright's disease, in Winckel's disease (acute epidemic afebrile hæmoglobinuria of the new-born with icterus), septicæmia and severe idiopathic *hæmorrhagia neonatorum*.

As regards the donor's compatibility, mother and child would appear to be always in the same group, so that the mother's blood may safely be used. As the incompatibility displays itself in the action of the patient's serum on the donor's corpuscles, the risk will be diminished by (1) giving small doses only and (2) giving the doses in such a way that they are slowly absorbed. This is achieved by giving the injection subcutaneously, not intravenously.

The use of citrates and other anti-coagulants is contraindicated for three reasons. Firstly, it is our aim to supply ready-made thrombin and the materials for making it as well. Secondly, although the injected blood clots, it soon expresses the serum, with its contained thrombin, etc., whereas the cells are kept localized in the clot and cannot be reached quickly by the patient's serum. Thirdly and lastly, in those conditions where jaundice is present, there is already a lack of calcium.

Technique.

A few cubic centimetres of blood are drawn off from the mother into an ordinary serum syringe and injected subcutaneously into the baby's back, much in the same way as diphtheria antitoxin is given. Assuming that the donor's blood is normal as to clotting-time, there is ample time for the procedure before the blood clots extensively, although the process will have started.

When this method fails and when the oozing sur-

face is accessible, the injection should be made just under this surface for the following reasons:

(i.) It walls off the lesion by its own clot and thus prevents the anti-thrombin reaching it at all quickly.

(ii.) It provides an ample supply of fibrinogen locally.

(iii.) The missing elements are supplied locally and are given time to act.

Summary.

To summarize, in the treatment of hæmorrhagic conditions in the new-born there are three main methods:

(1) Injection intravenously of citrated blood, given with all the usual precautions.

(2) Injection subcutaneously of small doses of untreated blood.

(3) Application locally of untreated blood.

Where possible, all three methods should be employed. My main point, however, is that whether the first and third methods are possible or not, the second should always be practised, even when it is not apparently indicated. It is safe, simple and successful.

More data on the subject would be useful. Perhaps older children can be treated with impunity along similar lines.

Clinical Studies.

RETRO-BULBAR NEURITIS AND DENTAL SEPSIS.

By E. Temple Smith, M.B., F.R.C.S. (Edin.), D.O. (Oxon.),
Senior Ophthalmic Surgeon to St. Vincent's and to the Royal
Alexandra Hospital for Children, Sydney.

Mr. A., aged 45, consulted me on August 24, 1920, because of "blurred" vision in his right eye of four days' duration.

I found his right vision to be barely $\frac{1}{60}$, but just normal with a small concave cylinder. His left vision was $\frac{1}{60}$ easily with a small convex cylinder. I found nothing abnormal in either fundus. The macular regions were natural and the media clear. He was a non-smoker. I was almost inclined to regard his complaint as imaginary or as due to the slight refractive error. But as he still maintained that, though he could see the letters with his right eye, it was as if through a veil and as I make it a rule to pay particular attention to symptoms when carefully described by the patient, I pursued the matter further. I was rewarded by finding that I had a very interesting case.

The peripheral fields were entire. On examining the central field with the scotometer and a minute coloured object I found in the right eye a small, horizontally-oval, paracentral scotoma for red and green, extending from and including the fixation point towards the nasal side for ten degrees. This was striking. For the papillo-macular bundle which is readily affected by the toxins of tobacco, lead and a few other poisons, has a very similar distribution, but on the opposite side of the fixation point. It was clearly not an affection of this bundle, but of another; it was probably not caused by one of those poisons. Furthermore he was a non-smoker.

The curious affinity of certain nerves and of even certain bundles of nerve fibrils for certain poisons and the constancy of such affinity may probably be explained by minute differences of molecular chemical constitution, such differences being related to function. These differences, though constant, to our laboratory methods, are imponderable, immeasurable, invisible.

Other instances are the affinity of the musculo-spirals for lead, the anterior crurals for alcohol, the muscle-afferent fibres of the latter for syphilis and arsenic and the auditory for quinine.

On applying Young's test, a very delicate one for detecting slight deterioration of the colour sense, the right eye showed marked depreciation of sensitiveness to weak dilutions of colour and to "light difference." The left eye behaved normally in these respects.

Affection of the colour sense is pre-eminently associated with lesions of the optic nerve leading to blindness. When the peripheral field is intact and the scotoma is a central one and when there are no signs to the ophthalmoscope in the nerve or at the macula, we infer an optic nerve lesion between the eye and the chiasma—a retro-ocular neuritis. This is more usually associated with an "absolute" scotoma, whereas this was a "relative" one. But a central scotoma for colour can always be found to precede an absolute loss of central vision if looked for early enough; just as a contracted peripheral field for colour gives the earliest indication of a contracting field for form. It must be remembered that testing with colours only has value in this connexion because they, especially red and green, have a lower luminosity than white and therefore provide a more delicate test for early impairment of the sense of appreciation of light intensity and light difference.

Such a condition as was found pointed to an early affection of the optic nerve and probably to a toxæmia. It may be asked why, if due to a blood state, it should not follow Gowers's postulate and be symmetrical. I have no doubt but that given time it would have become so. This was only four days old. The most likely cause, excluding syphilis, which I could do, was sepsis and the most likely site the mouth. On inquiry I found a front tooth looking brown and dead. This he admitted had been tender from time to time during the previous few months; he had intended some time to see his dentist. He did so and promised to see me again later. He rang me up a week later to say that the tooth had been drilled from behind, as he did not want to lose it; pus had been evacuated and it had been drained and sterilized. He said further that he had lost the haze in the right eye. I asked him to let me examine him again. He did not comply with my request till some ten weeks later. I then found that his right vision was $\frac{6}{5}$ without any glass, he was unconscious of any "blur," there was no scotoma and his "light difference" and colour perception were normal.

It is within the daily experience of every oculist to meet with gross changes in the eye, such as cyclitis and vitreous effusion, with sequent lens sclerosis, which are certainly due to pyorrhœa, and with iritis and keratitis which are probably often due to dental

sepsis. There the damage to the sight is often irreparable, even though the cause or probable cause is removed. But so clear a case of cause and effect, with so happy a result, is less often encountered.

It is unfortunate that a culture from the pus was not made, for which I am to blame. It might have been a link towards establishing the affinity of the nerve bundle having the retinal distribution described for the toxin of the particular organism involved. When the scotoma is on the opposite side of the fixation point, we practically know what toxins to look for, owing to the amount of clinical and experimental work on the subject that has been carried out.

Reports of Cases.

ANAPHYLAXIS AFTER INJECTING A SPECIFIC PROTEIN.

By B. C. Cohen, M.B., B.S. (Melb.),
Narrogin, Western Australia.

The following case shows the need of caution in administering a specific protein.

Mr. W. has suffered for many years with "dandelion fever," consisting of asthmatical attacks in the evening and early morning, itching of the skin, stickiness of the eye and headaches. He gets it every year about three weeks after the Cape weed commences to flower. He had been suffering for about a week and had recovered, with the exception of a little tightness of breath when I saw him in conjunction with Dr. D. Mackle with the purpose of injecting some pollen extract.

This extract had been made (according to Kelly and Munro) by extracting 0.5 gm. of the pollen from the Cape weed, commonly called dandelion, with 100 c.cm. of saline solution and preserved by mixing 15% alcohol.

The extract was filtered and found to contain both albumin and globulin. The amount in solution would be estimated (from the residue) at less than one fifth.

Skin tests were not found satisfactory in estimating the dosage. It was judged that 0.2 c.cm. would be a reasonable dose. On the above estimation this would contain 0.0002 gm. of protein.

Fifteen minutes after the injection a most intense asthmatical paroxysm commenced. He was given injections of adrenalin and of morphine, strychnine and atropine with very little benefit. He became cyanosed, with distended veins. The pulse-rate increased to 160 and the pulse was very weak. A papular rash came out all over his body and was accompanied by intolerable itching. The itching ceased in his eyes. He said he was dying and it certainly seemed as if he were.

For eight hours adrenalin injected about every hour and continuous inhalation of asthma powder were the only means by which he was afforded relief. Then another dose of 0.012 gm. of morphine gave him ease and at the end of twelve hours an injection of 0.006 gm. of morphine decided the passing of the spasm.

A peculiar symptom of which he complained was the taste in his mouth, as if he had been chewing the weed and also the smell of the flower.

He has had no attack since. He had been warned before the injection that it was largely experimental and he was very keen on it. Next year he desires it prophylactically, as the therapeutic action is a trifle drastic.

The injection of a specific protein should certainly be given with caution. The induction of an anaphylactic condition such as that described might readily prove fatal.

The death of Dr. Samuel Macaulay, formerly of Cottesloe, Western Australia, occurred at Brighton, Victoria, on December 29, 1920. Dr. Macaulay retired from practice over a year ago. He was an Edinburgh student and qualified in 1889.

The Medical Journal of Australia.

SATURDAY, JANUARY 8, 1921.

A Retrospect.

II.

Medicine.

Progress in medicine has become perennial, but since the mass of literature concerning the aetiology, pathogenesis, pathology, clinical manifestations and course and treatment of disease has long since attained an overwhelming magnitude, the medical practitioner is usually confused by conflicting opinions and thus fails to move with the times. It is, moreover, unfortunate that this immense literature contains but a trace of reliable information. Furthermore, at each epoch the majority of the problems remain unsolved, although there may have been some advance toward a full understanding. The year 1920 has produced a substantial harvest of scientific fruits. Some have still to be gathered; the final ripening has not yet occurred. Opportunity for scientific study is still plentiful, for the experience gained during the long years of war, the advantages of team work, the reference of important problems to committees of experts by the Medical Research Committee and the great augmentation of institutional treatment are still fresh in the minds of the medical practitioners of the Empire.

Practical medicine has joined hands with pure physiology in the study of dietaries and the feeding of human beings, both in time of peace and under the barbarous conditions of warfare. Necessity may compel a nation to introduce a system of rationing devised on minimum requirements. The lesson learned from Germany and Austria is that the minimum requirements of a whole nation can be reduced during a period of partial starvation. When the average weight and surface of the individual has been decreased, a new level is reached at which the lighter and smaller bodies of men and women can be kept. An endeavour has recently been made, prematurely we contend, to establish the peace-time dietary of the Australian on a basis of calories. There

is small doubt that some buy food representing considerably more than 6,000 calories for each person *per diem*. It is not improbable that many consume this quantity of food. Others, with small appetites and poor digestion maintain moderate health and a standard weight on half this quantity. In the next place, we have at present no machinery for estimating the total amount of food available, the average amount of food wasted, the caloric value of our Australian produce, the proportion of food under varying conditions of climate, habits and digestive activity digested by the average Australian worker. Nor have we any measure of the amount of work habitually performed by the average labourer. It is clear that a considerable amount of investigation has to be undertaken before the question of feeding a population on a basis of calories during the time of peace can be seriously considered.

Much work has been carried out in connexion with the determination of the basal metabolism. The older standards have been modified to some extent, more especially in regard to the variations according to the weight of the individual. Various formulæ have been devised to replace those of Du Bois; that of Dreyer has attracted much attention. Rough estimates are being applied in routine clinical investigations of certain morbid conditions, especially those affecting the thyroid gland. Much important work has been attempted. It would seem that the introduction of standard methods would be followed by a frequent use of these procedures in clinical practice.

Further study of the accessory food factors has yielded some important results. The special committee working under the auspices of the Medical Research Committee has extended its field of investigation beyond the laboratory. The researches of Hopkins and Mellanby have led to the recognition of the sources of the fat-soluble *A*, water-soluble *B* and anti-scorbutic vitamins, although the nature of these substances is still unknown. The relation of scurvy, rickets, pellagra and a few other pathological conditions to these accessory food factors is gradually being demonstrated. Much information has been gathered from a study of the aetiology of beri-beri. Although this study dates back many years, before Hopkins suggested the term accessory food factors:

in place of the term *vitamine*, introduced by Funk, many of the facts elicited in the early stages have only recently been reconciled with the clinical manifestations of this disease. The name of McCarrison appears very frequently in the year's record. One of the members of the special committee, Miss Harriette Chick, has been commissioned to test the accuracy of the laboratory findings in a large children's hospital in Vienna. Miss Chick, not being a medical graduate, has been wise in inviting the assistance of Dr. Elsie Dalyell, a young Sydney medical graduate, in this extended research. From the preliminary records of their clinical and physiological investigation of the metabolic disturbances in starved children, it seems that some important practical progress is being made in regard to the accessory food factor content of the diet of infants and children. Dr. Dalyell further announces that evidence is being collected concerning the action of the *vitamines* in the development of the different forms of tissues.

Transfusion of blood has reached an established position in the treatment of traumatic hæmorrhage and in hæmorrhage associated with labour. Numerous workers have investigated the results of transfusion in pernicious and other forms of secondary anæmia. The results have not been uniform. It has been demonstrated that, while the introduction of red blood corpuscles into the vessels of persons suffering from these conditions enables the organism to tide over a crisis and may even be the means of initiating a remission, no curative effect has been demonstrated.

The treatment of gastric disorders has received considerable attention from clinicians. Quite recently it has been shown by Rehfuss and Hawk that the gastric secretion of apparently healthy persons may contain a quantity of hydrochloric acid usually regarded as indicative of hyperacidity. Moreover, they found that no symptoms were necessarily produced by raising the hydrochloric acid content of the gastric juice to 0.5%. The influence of the nervous system on the development of disturbances of the stomach is being fully realized.

A highly important communication was made by Professor A. E. Mills to the Australasian Medical Congress on the mechanism of papilloedema. He

showed that in the majority of cerebral tumours and in other processes associated with choked disc, the primary factor in the production of this sign is a physiological disturbance of the choroid gland. He postulated a toxic disturbance in certain instances, while a mechanical insult might be found in others. We purpose to publish the full paper at an early date.

Epidemic encephalitis has been studied from the clinical aspect by many physicians. Progress has been made in the recognition of several well-defined forms. As will be mentioned in a subsequent chapter of this retrospect, little advance has been registered in regard to the ætiology and pathology of this condition.

Of great interest is the recent work conducted chiefly in the United States of America concerning the phenomena of protein sensitization in disease. The hypothesis of the allergic nature of asthma, hay fever and infantile eczema has received repeated confirmation. Chandler Walker and his co-workers have gradually established a practical method for dealing with these conditions. The intra-dermic reactions to pollen and other proteins enable the practitioner to determine the ætiological factor in these forms of asthma and hay fever. Desensitization is said to remove the liability to attacks.

The estimation of renal function in chronic nephritis has been simplified by the introduction of readily performed tests. This may have a profound effect in modifying our conception of the morbid processes affecting the kidneys.

The medical problems of aviation have received thorough investigation by experts working under the control of the Medical Research Committee. Hitherto this subject has not received due recognition in the Commonwealth. The work has led to the introduction of tests of suitability for aviators. After further study and adjustment, these tests will probably secure world-wide recognition as an important factor in civil aviation.

Surgery.

During the year 1920 Jonnesco's long awaited work on spinal anæsthesia has been published. His confident use of *stovaine*, associated with strychnine, is based on careful dosage. He applies it at all levels

of the spinal cord. He claims for its use complete muscular relaxation in persons undergoing abdominal operations, "abdominal silence," a powerful appeal.

Surgeons have endeavoured to rectify the unsatisfactory nature of surgical treatment of empyemata. Many have advocated aspiration, while others have preferred early aspiration with late resection. Again, others rely on intermittent aspiration and the injection of an antiseptic into the pleural cavity. The danger of too early thoracotomy and the need for drainage as low down as possible have been recognized by all authorities.

Smouldering fires have been fanned into flames by the endeavours of surgeons to establish an ideal operation for hæmorrhoids. The acrimonious discussion in *The Lancet* between Allingham and Smith some twenty years ago and ten years later the heated controversy in the *British Medical Journal* on the value of Whitehead's operation are still remembered. The clamp and cautery method is receiving the general approbation of the surgeons. We are indebted to C. E. Corlette for an admirable contribution to this subject. W. H. Mayo in America has also advocated the cautery method. The necessity for paying attention to technical details has been clearly indicated by Corlette.

In the realm of plastic surgery, the use of the tubed pedicle of Gillies has been found of value, especially for severe facial burns. The ideal treatment of burns is still being sought. Flavine has been found to be the most valuable antiseptic and is best applied combined with paraffin paste. Chloramine-T and brilliant green have been found unsatisfactory for application to burned surfaces.

The distinction between true exophthalmic goitre and adenomatous thyroid growths with late general symptoms usually attributed to toxæmia, is being widely recognized and valuable work has been completed on the morbid anatomy of the two conditions. Very little advance, however, has been registered in the pathology. The investigation of shock has been continued. No material advance has been made since the publication of the valuable report on this subject by the Medical Research Committee and since the findings of the Committee were subjected to discussion at the Royal Society of Medicine. In the treatment of

surgical shock, transfusion of blood, preferably by the citrated method, has many adherents.

The rôle of splenectomy in the treatment of splenic anæmia has been under discussion. It is now held that if the spleen be removed during the early stages, serious involvement of the liver will probably be avoided. Splenectomy for the treatment of pernicious anæmia has been discarded. The greatest triumph of this operation remains in hæmolytic icterus, provided that the patient be not already in the terminal condition.

Mere gastro-enterostomy for gastric or duodenal ulcer has few advocates. The majority of surgeons now favour local resection of the ulcer. Pauchet's method of gastrectomy is regarded as a valuable procedure.

Sampson Handley has advanced the hypothesis that Paget's disease is usually preceded by carcinoma of the smaller ducts; the eczema is regarded as a sign of its development in the nipple.

A starvation osteopathy, so-called "osteomalacia of the war" has been described, especially by German writers, who have had unusual opportunities for investigating this condition. The symptoms range from those of a mild form of rickets to spontaneous fracture.

The usual failure of surgical removal of thyroglossal cysts has been traced to the fact that a track of epithelium from the cyst to the *foramen caecum* is not sought and removed. The results have been improved by the introduction of a "block" operation. This operation consists in the removal of all the tissue in the region bounded by a line drawn from the upper border of the hyoid bone upwards and backwards at an angle of 45° to the *foramen caecum*.

Gynecology.

Many contributions have been published to the problem of the disorders of menstruation. Gynecologists have recognized the importance of treating these functional disturbances in girls and young women by means of general hygiene and properly regulated physical exercises. The patients are assured that menstruation is a normal process and that it is no more a cause of suffering than the digestion of food or any other physiological action. Florence L. Meredith has shown that only 2% of patients complaining of menstrual disorders require operative

treatment. In 49% of her patients the cause of the complaint was constipation, while in the remaining 49% it was traced to weak abdominal muscles with consequently sagging of the abdominal and pelvic viscera.

The physiology and pathology of the endometrium has been closely studied. Lawrence W. Strong has expressed the opinion that the relationship between the sexual gland hormone and the hormones of the other glands of internal secretion is too complex to admit of any simple explanation of the menstrual function. Other observers have called attention to the fact that the ovary produces an internal secretion or more than one secretion, in addition to that produced by the *corpus luteum*. It is recognized, however, that the *corpus luteum* plays the most important part in the mechanism of menstruation.

Ralph Worrall has published in our columns an excellently arranged review of four years' work at the Sydney Hospital. He draws attention to the fact that abdominal operations in women whose abdomen had previously been opened, are frequently complicated by adhesions which add greatly to the risks of the operation. As a large number of these cases arise in the practice of would-be surgeons who attempt operations before they are competent to deal with undiagnosed difficulties, he counsels the attendance on and the study of the work of experts.

His operation of enucleation of the cervical canal during hysterectomy for myoma or *fibrosis uteri* is one that should commend itself to all gynaecologists.

T. G. Wilson has dealt with the treatment of yielding of the suspensory apparatus of the female pelvic organs. In defining the results produced by a yielding of the various groups of supports, he has elaborated a very rational technique for the correction of these faults. Other authors have pointed out the importance of shortening the utero-sacral ligaments in cases of retroversion.

The treatment of myomata by means of X-rays and radium continues to be supported in some quarters. This treatment has been discarded by other competent gynaecologists on account of the alleged risk of malignant degeneration.

In a very interesting and instructive article, H.

H. Hampton and L. R. Wharton have dealt with venous thrombosis, pulmonary infarction and emboli. They have pointed out that venous thrombosis occurs in about 1% of gynaecological operations. They have found that the left leg is involved three times as often as the right. In a series of 170 patients with pulmonary complications after gynaecological operations, they were able to detect 34 instances of undoubted pulmonary infarction. The previous diagnosis had been either pleurisy or pneumonia. In their experience only 10% of all cases of pulmonary infarction were diagnosed correctly at the Johns Hopkins Hospital. As these conditions are not mentioned in the reports of other hospitals, the authors conclude that pulmonary infarction nearly always escapes the notice of clinicians.

Obstetrics.

Fourness Barrington in his admirable presidential address to the Section of Obstetrics and Gynaecology at the Australasian Medical Congress (Brisbane, 1920) draws attention to the fact that both puerperal mortality and puerperal morbidity are still much higher than they should be. He emphasizes the importance of abdominal palpation and non-interference during the third stage of labour for the purpose of lessening the incidence of puerperal sepsis.

Victor Bonney, speaking during the discussion on puerperal sepsis at the annual meeting of the British Medical Association at Cambridge, considers that in the majority of cases the infection is derived from the organisms normally present in the ano-perineal skin. From this area the bacteria are easily conveyed to the upper reaches of the vagina. He recommends the use of crystal violet or brilliant green in alcoholic solution as antiseptics in obstetrics. In the same communication he discusses the treatment of puerperal sepsis. He maintains that retained placental products are rarely discovered in the uterus after full-time labour and further that the infecting bacteria penetrate deeply into the musculature of the uterine wall at an early stage. He therefore concludes that curettage is not often admissible in these cases. He has had encouraging results from the ligation of the ovarian veins in thrombo-pyelitis of these vessels.

The subject of the so-called toxæmias of pregnancy

has engaged the attention of many obstetricians during the year. It has been claimed that the vomiting of early pregnancy is caused by some interference with carbo-hydrate metabolism. The evidence in support of this hypothesis is not convincing. Carbo-hydrates in the form of lactose or glucose in solution are recommended in the treatment by some authorities.

In an excellent article by A. W. Bourne on eclampsia and the pre-eclamptic state, this careful observer has pointed out that the gravity of the condition is proportionate to the increase of the blood pressure. He holds that it is of great importance for the present and future welfare of the patient to reduce a high blood pressure. Veratrine is used for the reduction of the blood pressure. The doses recommended by him appear to be too high; equally good results can be obtained with smaller doses.

Robert Jardine and A. Mills Kennedy report twelve cases of suppression of urine in pregnancy and the puerperium in which the condition was found *post mortem* to be due to symmetrical cortical necrosis of the kidneys. In all these cases symptoms usually attributed to the action of some toxin were recognized before the appearance of the suppression. These authors express the opinion that the eclamptic toxin passes through the liver and causes thrombosis and necrosis of the kidneys. Once suppression has set in, no treatment seems to be of any avail in preventing a fatal termination.

Further consideration has been given to the question of dealing with the post-mature child. It is stated that protracted pregnancy occurs in from 6% to 8% of all pregnancies. C. B. Read advocates the following procedure in the determination of post-maturity of the foetus. The length of the child is estimated by the Ahlfeld method; the size of the child is estimated by the McDonald manœuvre and the occipital-frontal diameter of the head by McDonald's modification of Perret's method. If these measurements indicate maturity and if labour does not set in within one week of term, induction is performed.

Neurology.

The war and its aftermath have taught the great lesson that there is a large number of men and women who have an acquired or inherited neuropathic temperament and are therefore unable to make or

sustain the needful mental adjustments to fit themselves for the occupations in which they have been or are at present engaged. In such cases the importance of psycho-therapy has become even more obvious than it was and the year had provided a rich crop of articles on mental hygiene, objective psychology, suggestion, psycho-analysis, the herd instinct and hysteria, giving testimony to the subject. Bearing on this matter and on neurology in general, Harvey Cushing has made a plea for the organization and endowment of national institutes of neurology, where team work could be carried out.

The acute encephalo-myelitis (*encephalitis lethargica*, infantile paralysis, "X" disease) have received continued consideration from the clinical and pathological points of view. It would seem that an allied virus is in operation in these conditions, in view of the similarity of the pathological lesions. Experimental work on the subject remains inconclusive or even contradictory. The means of cure and of prevention are still undiscovered.

John S. B. Stopford gives a useful review of the results of suture of peripheral nerves. His chief finding is that no recovery after secondary suture can be regarded as perfect. The final opinion of the French school may be mentioned that end-to-end suture and nerve grafts are the only logical methods of nerve repair. Such operations as the turning down of flaps, tubulization and nerve anastomosis are condemned.

The action of the spirochæte as a causal factor in nervous disease has been further studied. Marinesco brings confirmatory evidence that disseminated sclerosis is a spirochætososis. Marie and Levaditi contend that there is a special strain of the *Spirochæta pallida* to account for general paralysis of the insane.

Vegetative neurology and endocrinology continue to attract much attention, particularly in America. All that we can say of this welcome work is that it is still in an immature state, calling for much further investigation before it can receive the brand of exactitude demanded by neurology.

We desire to call the attention of medical practitioners to a notice which appears in our advertisement columns in this issue. The position of Resident Surgeon at the Victorian Eye and Ear Hospital is vacant. Those desirous of applying for this post should send in their applications as soon as possible.

Abstracts from Current Medical Literature.

THERAPEUTICS.

(10) Behaviour of Saccharin.

R. W. Wilcox (*Med. Record*, October 9, 1920) gives an account of the sources, characters, impurities, doses, actions and uses of saccharin and soluble saccharin. Saccharin, not infrequently called glucidum or glucimide, is the anhydride of orthosulphamido-benzol acid and is usually known to chemists as benzosulphinide. It is a derivative of toluene and consists of white crystals possessing a faintly aromatic odour. One part is equal in sweetening power to 300 parts of cane sugar. Its dose is given as 200 mg.. Soluble saccharin is the sodium salt of benzosulphinide. It occurs as colourless prisms, with little odour. One part of soluble saccharin is equal in sweetening power to 500 parts of cane sugar. Both of these substances are antiseptic, but have a limited use for this purpose. They are employed to sweeten foods. They are not foods, but condiments. The author states that they have no action upon any organ, tissue or function of the body and are absolutely harmless. They are eliminated in the urine and saliva and, after large doses, by the bowels. These bodies are used as substitutes for sugar when this food cannot be taken or when its ingestion should be limited. In diabetes 3 mg. may be added to a cup of tea or coffee. Amounts not exceeding 300 mg. in the day may be taken by diabetic patients indefinitely. The continued use of this quantity does not interfere with the amylolytic, peptic, tryptic and lipolytic enzymes of the alimentary canal. There is, however, evidence that the daily consumption of amounts exceeding 1.0 gm. will induce disturbance of digestion. The available methods of study reveal no change in any of the bodily functions when 300 mg. are taken daily for months. When amounts exceeding 600 mg. are taken daily a disagreeable bitter taste is noticed when food containing saccharin is introduced into the mouth. The author, who is president of the American College of Physicians, discusses the various efforts to limit or abolish the use of saccharin. He points out how the development of the bitter taste limits the ingestion of unnecessary amounts of saccharin. In his opinion this property renders the use of saccharin fool-proof. The basis of the endeavours to prohibit the use of saccharin has been that it is harmful in itself or that it lowers the value or impairs the quality of the foods sweetened by it. The author refers to the thirty-six years of his experience. Being called upon to treat a diabetic member of his family he utilized saccharin. Upon complaint that it tasted bitter and not sweet he undertook personal experiments carried out over the years from 1884 to 1912. He mentions that quantities less than 300 mg. lead to no physiological effects whatever. In respect to the impair-

ment of food value he admits that saccharin has no food value, but notes that, in products made with flour and sold by weight, the finished article sweetened by saccharin has a higher food value than that made with sugar, since flour has a higher caloric value than sugar. He contends that saccharin increases the ingestion of some foods by rendering them more palatable and more appetizing and that the quality of foods is thereby increased. Finally he quotes Joslin in connexion with the increased prevalence of diabetes which is noted to accompany the greater consumption of sugar. "If the community wishes to escape the menace to health from its inordinate consumption of sugar and to satisfy at the same time its "sweet tooth," the scientific physician should, in the author's judgement, encourage the use of saccharin as a condiment.

(11) Luminal in Epilepsy.

Julius Grinker (*Journ. Amer. Med. Assoc.*, August 28, 1920) reports the results of treatment of epilepsy by luminal in 100 cases observed by himself. Luminal or phenyl-ethyl-barbituric acid is a white, odourless and slightly bitter powder almost insoluble in cold water, slightly soluble in hot water, soluble in alcohol, ether or chloroform or in alkaline solutions. The drug was first introduced as a hypnotic in substitution for barbitone, from which it differs in that one phenyl group replaces one ethyl group. In the treatment of epilepsy luminal is prescribed in doses of 0.15 to 0.2 gm., given either as a tablet or in a capsule to be taken at night before retiring. In severe cases doses of 0.2 gm. three times daily may be required in order to prevent the recurrence of attacks. It is not claimed that the drug produces any curative effect in cases of epilepsy; it is stated, however, to be more efficient than the bromides in controlling and preventing the seizures. It is stated that no injurious by-effects have been observed after months of continuous administration, nor has any cumulative action developed. As is the case with bromides, any sudden cessation of treatment is liable to be followed by a series of severe attacks. Moderate doses of luminal appear to exert a favourable effect upon minor attacks, whereas bromides are comparatively ineffective in these conditions. Skin eruptions are stated to be of rare occurrence and urinary disturbances very infrequent. Renal and cardio-vascular diseases are not regarded as a contra-indication to the treatment. No harmful effects have been observed from the long-continued administration of this drug, nor does it appear to be habit forming. It is stated that the effect on the mentality of patients taking luminal over long periods was negligible, the mental hebetude and torpor of those taking massive doses of the bromides being absent.

(12) Gentian Violet in the Treatment of Purulent Arthritis.

John W. Churchman (*Journ. Amer. Med. Assoc.*, August 28, 1920) records the results of treatment of purulent

infections of joints by lavage and staining with solutions of gentian violet. It is maintained that treatment of septic arthritis as formerly practised by free incision and drainage is seldom necessary. The joint cavity is punctured, the purulent effusion washed out and a solution of gentian violet injected. This method is particularly applicable to pyogenic arthritis due to infection by *Staphylococcus aureus*, pneumococcus and other Gram-positive organisms. Clinical and bacteriological studies make it appear probable that the injection of the dye into a joint is capable of staining the bacteria present including those which lie in the depths of the synovial membrane. Experimental evidence suggests that the stain has a bacteriostatic effect upon the infecting organisms, causing a limitation of virulence, though not necessarily complete destruction of the bacteria themselves. Experiments *in vitro* show that the dye is capable of inhibiting the growth of the majority of Gram-positive organisms, having little effect on those which are negative to the Gram stain. In the treatment of joint affections by this method the cells of the synovial membrane appear to take up the stain without deleterious effect. The application of the selective bacteriostatic property of gentian violet to the elimination of Gram-positive organisms in cultural work has been suggested. Similar bacteriostatic qualities are also possessed by other dyes of triphenylmethane series, such as rosolic acid. To determine whether organisms stained by gentian violet were killed or whether their virulence was merely diminished, experiments were performed by the injection of stained cultures of different organisms into susceptible animals. It appears probable that the effect of the dye is to cause a very marked decrease of virulence in Gram-positive organisms.

(13) Action of Emetine on *Amoeba histolytica*.

W. Allan (*Journ. Pharm. and Exper. Therapeutics*, August, 1920) has completed an investigation into the action of emetine upon *Entamoeba histolytica* contained in stools. He added a loop of faeces swarming with amoebae to about five volumes of a solution of emetine in normal saline beneath a cover-slip. The examinations were made either at 26° or 37° C. and control specimens were used upon all occasions. The destruction of amoebae was shown by loss of movement, assumption of circular shape and re-arrangement of the granular contents towards one side of the cell. Various other substances, as quinine hydrochloride, aniline green and chrysoidin, were used as controls. With many samples of emetine and with different strains of amoebae in no instance did emetine affect the appearance and motility of the organisms in the stools in dilutions less than one in two thousand in the space of one to two hours and frequently dilutions as strong as one in one hundred and fifty failed to kill the *Entamoeba histolytica* in the allotted time.

UROLOGY.

(14) Chronic Vesiculitis in Prostatitis.

A. Marion (*Journal d'Urologie*, January, 1920) discusses the significance of distended, chronically inflamed seminal vesicles associated with hypertrophy of the prostate. Details of three recent cases are given; the writer arrives at some important conclusions. In all three cases the classical symptoms of "prostatism" were present and, in addition, more or less perineal pain. On account of the latter symptom suspicion of carcinoma arose, but in one of the cases bimanual palpation disclosed a movable, elastic, apparently innocent enlargement, while in the other two cases the gland, though moderately hard, did not display any other malignant characteristics. The most interesting observation was, however, that in all three cases the vesicles were enlarged and slightly tender. All three glands were considered enucleable and were attacked by the suprapubic route. In two cases the enucleation was difficult, in one easy, but in all three cases the seminal vesicles came away *en bloc* with the prostate, the *vasa deferentia* being snapped across by traction at the end of enucleation. All three patients did well. Pathological examination showed that the vesicles had bossy, thick walls, which were chronically inflamed and their cavities were distended with thin seropus. In the prostate, which appeared clinically innocent, an early malignant change was discovered in the centre of the gland, while in the other two, carcinoma in a more advanced state was diagnosed. Marion points out that in palpation we must distinguish between lateral propagation of the carcinoma in the direction of the vesicles and simple distension and inflammation of the vesicles due to pressure on or invasion of the ejaculatory ducts by an early carcinoma in the prostate. He states that operation is not contra-indicated, provided there is some mobility in the prostate itself, whereas actual propagation of the carcinoma laterally, easily felt as a ligneous buttress on each side, contra-indicates operation. His cases are too recent to allow him to discuss the ultimate results of this operation of vesiculo-prostatectomy. He believes that the perineal pain complained of in cases of early carcinoma of the prostate is due to distension and inflammation of the vesicles and urges that in future clinical observers should pay careful attention to the state of these sacs in cases of prostatic hypertrophy.

(15) Essential Renal Hæmaturia.

A. G. Rytina (*Journal of Urology*, June, 1920) discusses the treatment of essential renal hæmaturia by intrapubic injections of silver nitrate. The theories advanced to explain obscure, symptomless hæmaturias are (1) passive congestion, (2) patchy or diffuse fibrosis, (3) chronic papillitis, (4) varicose papillæ, and (5) nervous vasomotor reflexes without anatomical lesions. Of these, the most generally accepted theory is that of localized

nephritis. The author first discusses the surgical treatment by (a) nephropexy, which has small chance of success; (b) decapsulation, also ruled out, since recent experiments show that it prevents rather than favours the formation of a new circulation; (c) nephrotomy, to be avoided, since severe secondary hæmorrhage has occurred; and (d) nephrectomy, which is too radical and therefore only an emergency method. Secondly, he considers non-operative treatment. A certain amount of value attaches to general and local styptic measures, the latter applied through a ureteric catheter. The treatment here advised is the injection of 4 to 8 c.cm. of a 5% silver nitrate solution into the kidney pelvis. A previous urological examination should eliminate the possibility of stone, tumour or tuberculosis on the bleeding side. The author gives details of cases which show that solutions of less concentration than 5% failed to succeed. The injection is sometimes followed by pain and temporary increase in the hæmaturia. The treatment is repeated in a few days if the desired result is not achieved. The explanation of its action is unknown, but is possibly due to the pronounced reaction in the kidney and its pelvis.

(16) Treatment of Prostatic Abscess.

A. R. Stevens (*Journal of Urology*, June, 1920) reports the results of intra-urethral opening of prostatic abscesses without perineal incision. The routine methods previously used at the urological service of the Bellevue Hospital were satisfactory, but the convalescence was too long. These earlier methods were: (1) drainage into the posterior urethra either by a suprapubic, transvesical approach or by perineal incision of the membranous urethra; (2) drainage into the rectum in selected cases; (3) drainage into the perineal space through the posterior prostate capsule after dissection between the prostate and rectum. The intra-urethral method is not a new one. The author prefers not to go into the arguments for and against opening such abscesses into the urethra or into the perineal space, but he feels that if a surgeon favours drainage into the urethra, the "sound" method has distinct advantages over the open method. Gas and oxygen anaesthesia and the lithotomy position are employed. A metal sound (23 F) with a rather pointed end and a small curve is introduced; one finger in the rectum locates the sound at the apex of the prostate. The sound is introduced 2 cm. further, turned 90° and then with care forced through the lateral wall of the urethra into the corresponding lateral lobe of the prostate. It is then withdrawn to the apex of the prostate and in similar manner made to enter the opposite lobe. A larger sound (28 F) is then put through similar manœuvres. Pressure on the prostate will now expel much pus from the urethra. The urethra and bladder are then washed clean. No catheter is left in the urethra. Details of eight cases are given. Seven of the patients were

suffering from recent gonorrhœa. The patients were able to leave hospital in six days on an average and the temperature fell to normal as a rule on the second day. After perineal incision the temperature did not fall until the fourth day and the average stay in hospital was 31 days. In no case was there more than trivial hæmorrhage.

(17) Tuberculosis of the Urinary Organs.

In dealing with the surgical treatment of tuberculosis of the urinary organs, A. H. Peacock (*Northwest Medicine*, September, 1920) shows that the diagnosis is often difficult, even for those specially trained in urology. In tubercular epididymitis there is a slow development of a painless lump, usually involving only one epididymis. The lump is hard, nodular and irregular or crescentic in shape. There is often abscess formation and in some cases pus is discharged through the skin. As a rule the *vas deferens* is involved. The *vas* acquires the consistency and size of the stem of a clay pipe. The seminal vesicles are usually implicated. In the differentiation between tubercular and gonorrhœal epididymitis, the painlessness and nodular characters of the former are determining factors. In the next place, he deals with tuberculosis of the prostate and vesicles and in this connexion refers to the frequency with which tubercular abscess of the prostate may rupture into the bladder. Tuberculosis of the bladder is rarely limited to that organ. The condition is frequently secondary to a tubercular disease of the prostate, seminal vesicles or kidney. The organ usually decreases in size. It is noted that even after tubercular ulcers of the bladder have healed and the tenesmus has ceased, the patient suffers acutely from frequent micturition as a result of the chronically contracted bladder. Tuberculosis rarely attacks the ureter without involving the kidney. When both are affected the ureteral openings in the bladder are seen to be reddened and oedematous with tubercles or ulcers in their immediate neighbourhood. In these circumstances, the ureter is usually thickened and of large size. More frequently, however, the ureteral openings appear to be normal in the cystoscopic picture. The condition of the ureter and kidneys cannot then be diagnosed without ureteral catheterization. The author insists that a very thorough examination of all the organs should be undertaken when urinary tuberculosis is suspected or diagnosed. In the treatment he advocates the removal of as much caseous material as possible and the preservation of organs which are but slightly affected. The operation should be regarded as the first stage of the treatment. After operation he prescribes rest, treatment in sanatoria, tuberculin and other a hopeless relapse may occur if the climatic and physical measures. The patients should be kept under observation for a long time after apparent recovery, as it is not infrequent that patient's condition is not carefully watched.

British Medical Association News.

SCIENTIFIC.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, on November 12, 1920, Dr. C. Bickerton Blackburn, O.B.E., in the chair.

Dr. H. Bullock read a paper entitled "Observations on Some Cases of Acute Perforated Ulcers of the Stomach and Duodenum" (see page 21).

Dr. J. L. McKelvey read a paper entitled "Some Remarks on Cases of Gastric and Duodenal Ulcers" (see *The Medical Journal of Australia*, January 1, 1921, page 1).

Dr. J. G. Edwards gave a highly interesting lantern demonstration of skiagrams illustrating the diagnosis of gastro-intestinal lesions. The skiagrams which had been taken with remarkable skill, were grouped to show the types of changes associated with various forms of lesions. The demonstration evoked an expression of much appreciation.

Dr. J. Flynn congratulated Drs. Bullock and McKelvey on their papers. He stated that, however laudable the diagnosis of perforation of gastric and duodenal ulcers might be, it would be preferable if by study of the early symptoms and course, they could forestall and prevent perforation. He stated that much of the teaching in the modern textbooks was obsolete. Information was being gleaned from a study of the pathology in the living and from an appreciation of the inter-dependence of the stomach and suprapyloric duodenum. An ulcer of the peculiar type found in the stomach and duodenum was found nowhere else. The type of stomach that predisposed to ulcer was congenital. The stomach and the upper portion of the duodenum had many things in common. He instanced the peculiar sub-mucosal system of arterial supply, one set of vessels coming back from the mucosa to supply the muscular wall, the other set going to the mucous membrane, where they formed terminal or end-arteries. It was, he stated, unnecessary to call attention to the effects of embolus on these arteries. The pyloric segment of the stomach and the upper portion of the duodenum did not possess glands secreting hydrochloric acid. Both were endowed with endocrine properties. The former produced gastric secretin (Edkins) and the latter ordinary secretin (Bayliss and Starling). Who could say that the altered peristalsis and secretory disturbance in these regions was not related to the other ductless glands? In referring to the researches with gastro-toxic serum of Bolton, to the cytolytic work of Hort (haemolysin and mucolysin) and to the experiments with emulsions of streptococci of Rosenow and Sandford, he claimed that there was a marked predilection on the part of this portion of the alimentary canal for the elimination of certain toxins, whether metabolic or pyogenic. He thought that, while these researches had not led to a complete solution of the problems involved, many of the inferences drawn from them were suggestive. Bolton had shown that the formation of the ulcer could always be prevented by neutralizing the gastric juice with a 1% solution of bicarbonate of soda. Although they could not treat the cause, they could remove one condition in the absence of which the cause could not act.

Dr. Flynn attached importance to the history of the ailment, as given by the patient. He stated that the history of the case as detailed by the patient was more important than the result of physical examination. The most important signs were the periodicity, the chronicity and the characteristics of the pain. He did not regard the location of the pain as possessing the same diagnostic value as the manner in which it was relieved by food or by a small quantity of bicarbonate of soda. The history often enabled them to distinguish ulcer from other conditions of the upper portion of the abdomen. That the pylorus played a large part in gastric disorders was evident from the manner in which it acted on and was acted upon by the ileo-caecal sphincter and by the valve that guarded the ampulla of Vater. Sherrington had said that the only adequate stimulus for pain in a hollow viscus was tension. Pain in gastric and duodenal ulcer

was ascribed by almost every writer to hyper-acidity. It was, however, not due to the reaction of the gastric contents directly; rather it was caused by the hypertonus of the gastric walls. This Dr. Flynn regarded as an expression of disorder of mobility rather than of acidity.

The medical treatment of gastric and duodenal ulcer up to the end of the last century might be summarized in two words; rest and starvation. There could be no such thing as rest applied to the stomach. Surgical treatment had superseded medical treatment as a result of the failure of the latter.

Dr. Flynn gave a brief outline of Sippey's method of treatment. This treatment aimed in the first place at the reduction of the secretion of gastric juice by giving food which, while maintaining the nutrition of the patient, was as unirritating in its mechanical and clinical effect as possible. The diet consisted of 150 c.cm. of milk and cream in equal parts given every hour from 8 a.m. to 8 p.m.. This limited the production of gastric juice by the fundal gland, since it scarcely acted upon the pyloric mucosa and, consequently, produced little hormone from this situation. The second object of the treatment was to keep the contents of the stomach neutral or slightly alkaline. For this purpose, he gave 0.6 gm. of oxide of magnesium in emulsion every hour. Oxide of magnesium possessed four times the neutralizing power of bicarbonate of soda. It did not yield any carbonic acid gas, it had a mild aperient action and it evoked a much smaller secondary increase of secretion of gastric juice than bicarbonate of soda. It had been shown by Crohn that sodium bicarbonate was the most powerful stimulant to gastric juice yet known. Dr. Flynn admitted that Sippey's method was not easily carried out. If the economic obstacles to its application could be removed, its claims could be more judiciously considered. He was not prepared to express an opinion in regard to the possibility of this method of treatment superseding the surgical.

In conclusion, Dr. Flynn said: "With Sippey and Hurst claiming that they can cure these ulcers by medical treatment alone and Sir Berkeley Monynhan admitting that the only reliable resort to surgery is a partial gastrectomy, it remains for the future to disclose which way the pendulum of medical thought and practice will oscillate."

Dr. H. S. Stacy stated that he had carried out Sippey's treatment in a patient at Randwick Hospital. This patient had had gastro-enterostomy performed without any benefit accruing. He had improved under the continuous anti-acid treatment. This treatment was difficult to carry out, but he thought that the trouble entailed was well repaid. In regard to Dr. Bullock's and Dr. McKelvey's papers he considered that rigidity was the most important of the abdominal signs of perforation. As a rule, there was a sudden onset, a rising pulse-rate and, in a leaking type, a complete or partial absence of the liver dullness. All these signs were of importance in diagnosis. In the later stages the diagnosis was liable to be confused with that of appendicitis. As a rule, the prognosis was bad if the operation was not performed within 16 hours of the perforation. He congratulated Dr. McKelvey on having saved the lives of the two patients in whom perforation had occurred 24 and 36 hours prior to the operation. He (Dr. Stacy) did not perform gastro-enterostomy in these cases. He thought that it was essential to "get in and out" as quickly as possible. In many cases a gastro-enterostomy was not required at a later date. It was impossible to say whether a complete cure was effected by gastro-enterostomy. He thought that the good results obtained in Australia were due to the fact that the general practitioner sent his patient early for operation.

Dr. Stacy congratulated Dr. Edwards on his magnificent series of skiagrams. He considered that first-class work by expert radiologists overshadowed all other methods of diagnosis. The best apparatus was needed for this work and he was sorry to say that this was not provided in the majority of hospitals. The Federal Government had raised the duty on X-ray apparatus from 25% to 40%. This high rate of duty acted detrimentally by depriving the majority of patients of the advantages of modern radiography.

Dr. S. Sheldon referred to the *post mortem* findings in the case of three people who had died almost immediately after the perforation of a gastric or duodenal ulcer. In two of the patients the perforation occurred after they

had drunk large quantities of beer. He also referred to a patient, a chemist, who had had symptoms of gastric ulcer for some time. The symptoms had not abated after gastro-enterostomy had been performed. The patient vomited and died. It was found that the cause of death was cerebral hæmorrhage. The gastro-enterostomy had been performed four or five years before. He had found that there was still a large unhealed gastric ulcer. In regard to duodenal ulcers, the diagnosis was usually made on the basis of a hæmorrhage. The majority of these patients were able to lead comparatively happy lives after medical treatment, without operation. He held the opinion that medical treatment should be given a fair trial before surgical treatment was considered.

Dr. D. Kelly referred to a paper on gastric and duodenal ulcer which he had published in *The Medical Journal of Australia* of August 25, 1917. He did not think that there had been any advance in the diagnosis of the condition during the past ten years or more. It was easy to recognize the perforation of a duodenal or gastric ulcer. The treatment of perforated ulcer was necessarily surgical. He asked Dr. Bullock why he did not remove the ulcer or cauterize it. He thought that closing the perforation by suture should be done transversely, in order to prevent stenosis. He advocated Lembert's sutures and not the purse-string suture. He had abandoned gastro-enterostomy. He called attention to the impossibility of suturing an ulcer surrounded by much indurated tissue. It was necessary to cut out the indurated part before the sutures were applied. In conclusion, Dr. Kelly expressed the opinion that the radiographic appearances after a bismuth meal had been given were entirely unnatural. The weight of the fluid carried the organ downwards into a dependent position.

Dr. Ralph Worrall called attention to the contrast between the diagnostic signs of colic and those of perforation. In the former condition the patient rolled and writhed about in the bed. In the latter he remained motionless and his abdominal walls were tense and fixed.

Dr. T. W. Lipscomb asked Dr. Edwards whether he regarded the radiographic diagnosis of gall-stones as satisfactory in view of his statement that the stones could be detected in this way only in 30% of thin people.

Dr. H. Hamilton Marshall dealt briefly with the diagnostic signs of ulcer before perforation occurred. He considered that X-rays were very useful in this connexion.

Dr. W. B. Dight congratulated Dr. Edwards on his admirable demonstration. He considered that the classification of the skiagrams and the fact that in each one the lesion was demonstrated, were extremely useful. It was important to study the conditions extrinsic to the stomach.

Dr. H. C. R. Darling held that in the majority of gastric ulcers the perforation could be closed quite efficiently with a purse-string suture. In some cases there was a large mass of oedematous indurated tissue around the perforated ulcer extending for 4 to 5 cm. This tissue was friable and was not suitable for suture. The operation had to be done rapidly. He either fixed a plug of omentum into the perforation opening or inserted a tube packed around with omentum, to form a drainage channel. He held that more knowledge was required concerning the condition of the whole organ than was usually obtained at a hurried operation of this kind.

Dr. C. Bickerton Blackburn, O.B.E., called Dr. Flynn's attention to that fact that the defects of sodium bicarbonate referred to in the excellent paper from which he had quoted so fully, was not an American discovery. It had been demonstrated years ago by animal experiments that the neutralizing effects of this salt was liable to be followed by stimulation of the glands to further secretion of acid. For this reason he (the speaker) had long followed other physicians in a preference for other alkalinizing agents. He dealt briefly with the effects not infrequently noted when large quantities of bicarbonate of soda were taken. Apart from the physiological mechanism of which Dr. Flynn had spoken, there was the nervous factor in the production of signs and symptoms. This factor should be seriously considered. It had been quite common to observe among soldiers a condition with symptoms indistinguishable from gastric ulcer. X-ray study of these cases had revealed that no ulcer was present. In some cases all the symptoms

of a duodenal ulcer were simulated. It had been said that the diagnosis of a perforated gastric or duodenal ulcer was very easy. That this was not always so, was exemplified in the case of a patient who had been seized suddenly with extremely violent pains on his way home from work. The patient was collapsed, was sweating and had the typical facies. There was agonizing pain localized half way between the ensiform cartilage and the umbilicus. The diagnosis of perforated ulcer was made and the surgeon concurred in this diagnosis. When the abdomen was opened, it was found that the patient was suffering from acute gangrenous appendicitis; the appendix was not even retrocaecal.

In his reply Dr. H. Bullock repeated that in his paper he had limited himself to the discussion of some observations connected with acute intra-peritoneal perforation. He congratulated Dr. McKelvey on his excellent paper. Dr. McKelvey had dealt with the reasons for the present of symptoms on the right side of the abdomen. Moynihan had described the descent of the fluid along the upper border of the transverse meso-colon to the right of the hillock formed by the transverse colon fitting on the greater curvature of the stomach and thence being deflected along the hypatic flexure. In nearly all his patients the ulcer was situated in the pyloric region and the maximum tenderness was situated to the right of the middle line. Alexander Miles had stated that the tenderness in perforations at the cardiac end of the stomach was situated in the left hypochondrium and perforations in the body of the stomach at the umbilicus and in the pylorus and duodenum in the right hypochondrium. It was impossible to judge the value of this localization in the only two cases of ruptured gastric ulcer in his series, because the condition was too far advanced and the abdominal tenderness had become general.

In reference to the question of the differential diagnosis, Dr. Bullock referred to a patient operated on at St. Vincent's Hospital. The patient had informed him that he had previously had his appendix removed. Dr. Bullock therefore concluded that there was a perforated duodenal ulcer. At the operation perforation of the appendix, which was situated behind the caecum, was discovered. In another case he had found empyema of the gall-bladder and a perforated duodenal ulcer. The third case was quoted to illustrate the difficulty of distinguishing a ruptured ectopic gestation in a girl for 16 years from a perforated ulcer. He held that if notice were taken of the degree and extent of the reflex rigidity, few mistakes in diagnosis would be made.

In regard to the question of incision, he differed from Dr. McKelvey and maintained that the incision he had described would satisfy all the requirements of these cases. He stated that the middle line above the umbilicus with its broad stretch of *linea alba*, should be avoided in all cases in which there was liability to sepsis on account of the risk of hernia. He claimed that hernia was frequently the result of Battle's para-rectal incision after nerve injury had taken place and sepsis had supervened.

In reply to Dr. Kelly's remarks concerning the excision of the ulcer, he stated that the attendant induration did not represent ulceration underneath. The perforation itself corresponded to the ulcerated area and the induration was the result of the accompanying inflammation. The greater the chronicity, the more diffuse was the induration. If an attempt were made to excise the ulcer together with the indurated tissue, in the majority of pyloric ulcers a pylorotomy would be necessary. He agreed with Dr. Kelly that Lembert's sutures were satisfactory, although he would prefer interrupted mattress sutures at right angles to the long axis of the gut. He had, however, never failed to close the perforation by using a purse-string suture. In none of his cases had stenosis resulted.

Concerning the advisability of gastro-enterostomy, he claimed that it was not in the best interests of the patient to submit him to a longer operative procedure when a shorter one would yield excellent results, more particularly when the peritoneum had been soiled and fresh tissues would have to be opened up. Better results and lower mortality would be attained if a short, efficient operation were performed. There was no proof that gastro-enterostomy would cure either gastric or duodenal ulcer. Mayo had stated and his own experience confirmed this view, that in the majority of ulcers perforation effected a cure.

Notwithstanding the usual teaching that a drainage-tube should not be left in the abdominal cavity for more than 24 hours, he had found it advisable in many instances to keep the opening for drainage patent for a week or even longer.

In his reply Dr. McKelvey dealt with the question of gastro-enterostomy. The majority of surgeons held that this operation led to the cure of a duodenal ulcer. He was in the habit of carrying it out. The duodenal mucous membrane was intolerant of the acid gastric secretion and healing apparently took place more readily when the gastric contents were diverted. The history of the surgical treatment of gastric ulcer suggested that finality had not yet been reached. Kocher had stated that he could cure any gastric ulcer by a posterior gastro-enterostomy. Later, excision of the ulcer had been introduced. Still later, surgeons had combined excision with gastro-enterostomy. Then the cautery had been used. But, notwithstanding all these procedures, satisfactory results had not been attained. Many surgeons were performing a partial gastrectomy. Whatever surgical procedures were adopted at the time of the perforation, further medical or surgical treatment usually became necessary at a later date. After referring briefly to Dr. Blackburne's interesting remarks concerning nervous manifestations simulating perforation, Dr. McKelvey concluded by repeating that anyone who obtained good results in late cases of perforated ulcer should consider himself lucky.

Dr. J. G. Edwards informed Dr. Lipscomb that gall-stones could be demonstrated in 30% of all cases. It was easier to demonstrate them in thin than in obese persons. He agreed with Dr. Stacy that the X-ray apparatus in hospitals was often not modern.

Dr. Archie J. Aspinall presented a patient who had had several compound fractures of the arm and forearm, the result of a motor-omnibus accident (a full account of this case will be published in a subsequent issue).

Several members congratulated Dr. Aspinall on the admirable result of his treatment.

THE QUEENSLAND MEDICAL LAND INVESTMENT COMPANY, LIMITED.

We have been requested to publish the following report of the Directors of the Queensland Medical Land Investment Company, Limited, for the year 1920:

Your Directors have pleasure in handing you herewith a copy of the balance sheet and profit and loss account for the year ended November 25, 1920. The year's operations result in a net profit of £240 1s. 7d., as shown by the profit and loss account.

The year has been an uneventful one as regards the working of the company, everything running smoothly.

At the last annual meeting a dividend of 5% (free of income tax) on the amount paid up on the shares was declared and paid during December, this being the sixth dividend of 5% paid by the company.

During the year £50 was paid off the loan from the Diocesan Synod, making a total of £850 since the building was occupied in 1913. It is proposed to pay a further £200 off the loan at the end of this month and probably another £50 at the end of March next.

It is intended to declare a further dividend of 5%, free of income tax, at the annual meeting to be held on Thursday, December 9, 1920.

The following amounts have been paid for rates and taxes during the year, which have greatly increased:

	£	s.	d.
Rates	70	14	1
Tax on Dividend	7	1	0
Queensland Land Tax	51	10	0
Queensland Income Tax	14	4	8
Federal Income Tax	19	12	6
	£163	2	3

as against £133 10s. 3d. paid in 1919.

A further 300 shares in the capital of the Company

were issued to the Queensland Branch of the British Medical Association during the year.

(Signed) WM. N. ROBERTSON,
Managing Director.

MEDICAL DEFENCE SOCIETY OF QUEENSLAND.

The following is the annual report of the Medical Defence Society of Queensland:

Report of Council for 1920.

Your Council has to report that no legal cases have been dealt with during the year. The Society was asked for assistance by a member who was threatened with an action for alleged negligence. After discussion, it was decided to offer him the moral support of the Society and the use of its solicitors in consultation with his own, defraying the costs of the Society's solicitors. This was not considered satisfactory by the member, who resigned from the Society. The Society was also asked for advice by a member regarding a claim for fees and mileage rates. His claim was supported and he was advised to issue a writ for the full amount.

The State Government Insurance Office has not been able to finalize any arrangements for a scheme of indemnity insurance.

In September the Federal Income Tax Commissioner called for returns of income for the years 1914-19. These were furnished and a claim submitted that the Society was exempt from income tax under Clause 11b of the *Companies Act*. No reply has been received to date.

At the annual meeting Dr. A. B. Carvosso was elected President, Dr. J. Espie Dods Vice-President, Dr. R. Marshall Allan Honorary Secretary and Dr. A. H. Marks Honorary Treasurer. Mr. R. G. Groom was appointed Auditor.

Letters have been sent to all members of the Queensland Branch of the British Medical Association who were not members of the Society. The result was gratifying, as 33 members were added to our list.

The Society has now a membership of 163. During the year 33 new members were elected, 1 resigned, 14 left the State. We regret to record the following losses by death: Dr. E. J. Spark, who for a number of years acted as Honorary Treasurer of the Society, Dr. R. B. Huxtable, Dr. J. V. Church and Dr. W. B. Nisbet.

The total assets of the Society now amount to £1,079 6s. 6d..

(Signed) A. B. CARVOSSO, President.
R. MARSHALL ALLAN,
Honorary Secretary.

Balance Sheet.

The balance sheet of the Society, made up to November 30, 1920, shows that the total assets amounted to £1,079 6s. 6d., of which £956 6s. 11d. was the balance on December 1, 1919, and £122 19s. 7d. was the surplus of receipts over expenditure for the year ended November 30, 1920.

Of the assets, £600 were invested in the Federal War Loan and £100 in the Queensland Medical Land Investment Company, Limited.

No expenditure was incurred in the defence of any of the members during the year.

NEW YEAR HONOURS.

Among the recipients of New Year Honours there is one member of the medical profession in Australia. We tender our heartiest congratulations to Doctor A. Jarvie Hood on his knighthood.

The medical profession has reason for gratification on account of the fact that knighthood has been conferred on Doctor Dawson Williams, the Editor of the *British Medical Journal*, and on Doctor S. Squire Sprigge, the Editor of *The Lancet*. Both have performed invaluable services to the medical profession and to the Empire and both are men of exceptional ability, learning and sound judgement.

THE APPEAL FOR THE INDUSTRIAL BLIND INSTITUTION OF NEW SOUTH WALES.

Her Excellency Dame Margaret Davidson issued an eloquent appeal on Christmas Eve, through the medium of the daily press in Sydney, to the people of New South Wales to make a donation in aid of the blind people of the State as "their Christmas act of joy and gratitude for the blessing of sight." Provision is being made for the training and employment of blinded soldiers. Whether the present plan for enabling the man who lost his sight in the service of the Empire to occupy a satisfactory position as a wage-earner, remains to be seen. In any event, the obligation rests with the Commonwealth authorities and must be discharged. The position of the blind civilian is a totally different one. In the past he has been offered opportunities in all the States to learn a trade suitable for a blind worker. Ordinary employers do not find it profitable to engage the services of blind men, because the result of their affliction is necessarily slow production. In consequence, the blind man is nearly always engaged in piece-work. The Industrial Blind Institute of Sydney has paid about 25% above the award rate in piece-work wages to their blind trainees. This, however, represents a smaller daily or weekly earning than a sighted worker can command. To enable the Institute to pay the blind workman year in year out a suitable stipend necessitates the collection of a relatively large sum of money. We claim that contributions to a fund of this kind form an important item on the programme of true socialism. The blind man has a right to live and to enjoy life.

AN AUSTRALIAN BOOK ON PATHOLOGY.

No one who has attended Professor Sir Harry Allen's lectures and demonstrations on pathology entertains any doubt concerning the value of his teaching. It is gratifying to learn that the advantages of these excellent lectures and demonstrations are now being offered to the profession generally. The lectures have been revised and a limited number of copies printed departmentally in book form. The book occupies 474 pages. In addition to the full notes of the lectures, it contains a list of specimens from the museum of the University of Melbourne on which the lectures and demonstrations are based. Medical men desiring to take advantage of this opportunity should address an application for a copy of this book and enclose a remittance of 22s. 6d. to the author, Professor Sir Harry Allen, Department of Pathology, Medical School, University of Melbourne.

THE AUSTRALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Arrangements have been made for the transference of the meeting of the Australian Association for the Advancement of Science from Hobart to Melbourne on account of the strike of ships' stewards. The meeting will open on January 10, 1921, when the President, Sir Baldwin Spencer, will deliver his address in the Melba Hall. The sectional meetings will be held in the University buildings.

Correspondence.

UNILATERAL CONGENITAL CYSTIC KIDNEY.

Sir: In *The Medical Journal of Australia* of December 25, 1920, before the Melbourne Pædiatric Society, Dr. H. Douglas Stephens reported a case of unilateral congenital cystic kidney and remarked on its rarity. Some years ago I presented a specimen of this nature to the Pathological Museum at the Sydney Medical School. It is there to-day (Specimen No. 2020). It was taken from a baby three and a half months old who had died from enteritis. The right kidney was represented by a collection of small cysts, the whole being the size of a walnut. It was retained at the brim of the pelvis, lying over the innominate vessels; a short ureter attached it to the bladder. The left kidney was enlarged but healthy. The bladder showed a transverse fold in its interior, running from before backwards and dividing it into two incomplete compartments. I regard the

condition as one of defective development of the kidney. A very similar condition is depicted in Coates' "Pathology." It appears to be quite distinct from polycystic degeneration of the kidney which, though congenital in origin, has more of the characters of new growth.

Yours etc.,

W. F. LITCHFIELD.

Macquarie Street, Sydney.
December 29, 1920.

PARANOIA AND OCCULTISM.

Sir: In the *Journal* of November 27, 1920, there appeared a leader entitled "Paranoia and Occultism." The tenor of this article is summed up in the sentence of the last paragraph, which contains the words the "pernicious doctrine of the occultists." There has been no previous discussion on the subject of spiritualism in the pages of the *Journal* to my knowledge, but we are suddenly recommended by the editor to warn suggestible patients against these "pernicious doctrines." To one with a perfectly open mind the article appeared to arise from the brain of a man intensely bigoted and averse to listening to any new doctrine, even though he had not given that doctrine due and just thought. Why should we not approach any new idea without intense bias and apparent hatred? Admitting that in days gone by spiritualism has been in the hands of charlatans and crooks, when such men as Oliver Lodge and Conan Doyle take the matter up, can we not give them a fair hearing and await further proofs or disproofs. It is well to remember that the science of medicine graduated from the same charlatans and necromancers and even to the present day the magic of the tribal medicine man might damn the science if we took such as a criterion of the power to heal. The above article contains the following untrue statement (if it is meant to apply to that earnest capable man at present speaking in Australia, as well as to the rogues who knowingly deceive for gain) "they would have us accept their delusions and thus destroy the essence of all religious creeds." Anyone who has read the books by Sir Arthur Conan Doyle or attended his lectures will find that not only does he not attempt to destroy all religious creeds, but gives to mankind something which aids those beliefs and possibly may bring some of the strayed or forgotten sheep back into the flock.

I have not seen a spook, I have never attempted to see or communicate with those beyond the Great Divide, but to anyone with an open mind I consider that the article in question is the most unfair and not altogether true statement of present-day knowledge that could ever be printed in an otherwise fair minded journal devoted to medical science. If the *Journal* recommends medical men to become bigoted and unthinking and does not allow them free thought for any theory of the hereafter that may be brought forward, well, it savours of labour caucus rule. Let us read, mark, learn and inwardly digest these matters before we pass criticism.

There is an excellent leading article in the December *Triad* on the subject. Here the editor says "we are not convinced," but he approaches the matter with such a purely open mind that when one has laid the article down one cannot help comparing it with the biased leader in *The Medical Journal of Australia*.

Yours, etc.,

A. T. A. NISBET, M.B., Ch.M., D.P.H.

"Lauriston," Wickham Terrace, Brisbane,
December 29, 1920.

Books Received.

DIAGNOSTIC METHODS, CHEMICAL, BACTERIOLOGICAL AND MICROSCOPICAL: A Text-book for Students and Practitioners, by Ralph W. Webster, M.D., Ph.D.; Sixth Edition, revised and enlarged; 1920. Philadelphia: P. Blakiston's Son & Company; Royal 8vo., pp. 844, with 37 coloured plates and 170 other illustrations. Price 8s. 6d.
VENEREAL DISEASES: THEIR CLINICAL ASPECT AND TREATMENT, with an Atlas of 106 Colours and 21 Half-tone Illustrations, by J. E. R. McDougall, F.R.C.S.; 1920. London: William Heinemann (Medical Books), Ltd.; Crown 8vo., pp. 419. Price, £3 3s.
THE SCHOOL OF SALERNUM, Regimen Sanitatis Salernitanum, The English Version by Sir John Harington; History of the School of Salerno by Francis R. Packard, M.D., and a Note on the Prehistory of the Regimen Sanitatis by Fielding H. Garrison, M.D.; 1920. New York: Paul B. Hoeber; Crown 8vo., pp. 216, illustrated. Price, \$3.75.
DIABETES, a Handbook for Physicians and their Patients, by Philip

- Horowitz, M.D.: 1920. New York: Paul B. Hoeber; Crown 8vo., pp. 198, with 27 text illustrations and two coloured plates. Price, \$2.00.
- PRACTICAL BACTERIOLOGY, BLOOD WORK AND ANIMAL PARASITOLOGY**, including Bacteriological Keys, Zoological Tables and Explanatory Clinical Notes, by E. R. Stitt, A.B., Ph.G., M.D., Sc.D., LL.D.: Sixth Edition, Revised and Enlarged; 1920. Philadelphia: P. Blakiston's Son and Company; Crown 8vo., pp. 633, with one plate and 177 other illustrations containing 637 figures.
- COLLECTED PAPERS ON THE PSYCHOLOGY OF PHANTASY**, by Dr. Constance E. Long; 1920. London: Baillière, Tindall & Cox; Demy 8vo., pp. 216. Price, 10s. 6d. net.
- ANXIETY HYSTERIA, Modern Views on Some Neuroses**, by C. H. L. Rixon, M.D., M.R.C.S., and D. Matthew, M.C., M.B., Ch.B., with a Foreword by Colonel Sir A. Lisle Webb, K.B.E., C.B., C.M.G.; 1920. London: H. K. Lewis & Company, Limited; Crown 8vo., pp. 124, with eight illustrations. Price, 4s. 6d. net.
- A POCKET BOOK OF OPHTHALMOLOGY**, by Arthur Jas. Ballantyne, M.D., F.R.F.P.S.; 1920. Edinburgh: E. & S. Livingstone; Crown 8vo., pp. 119.
- A CONSULTING SURGEON IN THE NEAR EAST**, by A. H. Tabby, C.B., C.M.G., M.S., F.R.C.S.; 1920. London: Christophers; Demy 8vo., pp. 279. Price, 15s. net.

Proceedings of the Australian Medical Boards.

VICTORIA.

The undermentioned have been registered under the provisions of Part I. of the *Medical Act, 1915*, as duly qualified medical practitioners:

- Gulseppe Ravelli, M.D., D.S., Bologna, Italy. 1901, 16 Flinders Street, Melbourne.
- Elizabeth Ross, M.D., 1912, Ch.B., 1911, Boston, Homoeopathic Hospital, Melbourne.
- Ernest Albert Guymner, M.B., B.S., Adelaide, 1914, Smythesdale.

The name of the late Dr. William Andrews has been removed from the Register.

Medical Appointments.

Dr. Keith McKeddie Doig (B.M.A.) has been appointed a Public Vaccinator at Colac, Victoria.

Dr. A. S. Johnson (B.M.A.) has been appointed District Medical Officer and Public Vaccinator at Albany, Western Australia.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxiii.

(Late) German New Guinea Public Service: Medical Officer. Government of North Borneo: Medical Officers. Victorian Eye and Ear Hospital: Resident Surgeon.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Institutes or Medical Dispensaries. Manchester Unity Independent Order of Oddfellows. Ancient Order of Foresters. Hibernian Australian Catholic Benefit Society. Grand United Order of Free Gardeners. Sons of Temperance. Order of St. Andrew. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

- Jan. 11.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
- Jan. 12.—Northern District Med. Assoc. (N.S.W.), Narrabri (Annual).
- Jan. 13.—Vic. Branch, B.M.A., Council.
- Jan. 14.—S. Aust. Branch, Council.
- Jan. 18.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
- Jan. 20.—Western Med. Assoc. (N.S.W.), Blayney.
- Jan. 26.—Vic. Branch, B.M.A., Council.
- Jan. 27.—S. Aust. Branch, B.M.A..
- Jan. 27.—Q. Branch, B.M.A., Council.
- Feb. 1.—Federal Committee of the B.M.A. in Australia.
- Feb. 2.—Vic. Branch, B.M.A., Presentation of Balance Sheet, 1920.
- Feb. 4.—Q. Branch, B.M.A..
- Feb. 8.—N.S.W. Branch, B.M.A., Ethics Committee.
- Feb. 10.—Vic. Branch, B.M.A., Council.
- Feb. 11.—Q. Branch, B.M.A., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.
Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.
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(Telephone: B. 4685.)